# CATASTROPHIC MULTIPLE-DEATH FIRES IN THE UNITED STATES – 2003

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September 2004

Thirty-five catastrophic multiple-death fires killed 307 people in 2003, compared to 2002 when 32 fires killed 160 people. Of the 307 victims, nine were firefighters. In the most deadly incident, 100 patrons and employees of The Station nightclub in West Warwick, Rhode Island, were killed in a fire involving indoor pyrotechnics. This was the deadliest fire in a public assembly property in the U.S. since 1977.

There was a 92 percent increase in the number of deaths in catastrophic multiple-death fires from 2002, with the nightclub fire accounting for 68 percent of this increase. The number of catastrophic multiple-death fires increased by three, or 9 percent. In the U.S., there were 1,584,500 fires in 2003, with 3,925 civilian deaths. The catastrophic multiple-death fires accounted for .002 percent of the fires and 7.8 percent of the deaths.

Catastrophic multiple-death fires are fires that kill five or more people in a residential property, or three or more in a nonresidential or nonstructural property.

#### Where We Get Our Data

NFPA obtains its data by reviewing national and local news media, including fire service publications. A news clipping service reads all daily U.S. newspapers and notifies the NFPA Fire Analysis and Research Division of catastrophic fires. Once an incident has been identified, we request information from the local fire department or the agency having jurisdiction. NFPA's annual survey of U.S. fire experience and mailings to state fire marshals are additional data sources, although not principal ones. We also contact federal agencies that have participated in the investigation of such fires. The diversity and redundancy of these sources enable us to collect the most complete data available on catastrophic fires in the U.S.

#### **Catastrophic Residential Fires**

In 2003, the most catastrophic multiple-death fires occurred in residential structures. There were 16 residential fires — 13 in single-family dwellings (two of these were manufactured homes), one in a 16-unit apartment building and one in a 13-unit rooming house used for off-campus student housing. One fire killed five members of one family after an exposure fire ignited their home. Their home was one of 10 dwellings ignited in the neighborhood conflagration. Residential occupancies accounted for 46

percent of the catastrophic multiple-death fires in 2003. There were 91 deaths in these fires, down from 95 in 2002, a 4 percent reduction. These deaths represent 30 percent of the total deaths in catastrophic multiple-death fires. Twenty-nine children under the age of six perished in these fires, compared to 30 in 2002. Twelve of the 16 catastrophic residential fires occurred between 11 p.m. and 7 a.m. Table 1 shows the available details for each fire.

There were three fires that killed seven people each, with two victims in each fire under the age of six. One of these fires occurred in a two-and-a-half-story single-family dwelling and started when a Christmas tree either fell over or was unintentionally knocked over onto a lit candle in a first-story living room. Some members of the family arriving home attempted to fight the blaze, causing a delay in notifying the fire department. There were no smoke alarms in the house.

Another of the seven fatality fires, in a 1-1/2-story single-family dwelling, started when an unattended child ignited combustibles with a match or on a stove. Parts from a smoke alarm were found after the fire, but investigators couldn't determine if the alarm had operated. The other seven-fatality fire was also in a single-family dwelling, but no cause or fire origin was reported.

Five other residential fires killed six people each. The first fire occurred in a one-story single-family dwelling. One of the victims was under the age of six. A malfunction in a floor receptacle ignited combustibles in the living room. Fire spread to wall paneling and then throughout the dwelling. There were smoke alarms in the house, but the batteries had been disconnected. The second fire occurred in a one-story single-family dwelling when smoking materials ignited bedding. There were smoke alarms present, but it wasn't known where the alarms were or if they worked. Security bars on the windows with no quick-release mechanisms hampered escape and rescuers. The third fire occurred in a two-story single-family home. A power strip for a window air conditioning unit was pinned between a couch and the wall and overheated, igniting the couch and window treatments. The fire burned into the joist space and spread throughout the home. There were no smoke alarms present. All the victims were in beds on the second floor — four of them were under the age of six. The fourth fire originated in a manufactured home occupied at the time by 12 people. An unattended candle ignited nearby combustibles.

The fire heated adhesives holding ceiling panels in place causing them to fall. Two victims were trapped by the collapse. Smoke alarms in the home operated and alerted the occupants. Six persons survived the fire in a bedroom behind a closed door. Two of the victims were under the age of six. The fifth fire occurred in a one-story single-family dwelling. No official cause or origin was reported for this fire. Two victims were under the age of six.

Eight catastrophic residential fires killed five people each. Five of these fires were in single-family dwellings, two involved apartment buildings, and one was in a rooming house. The first fire began when an ember from a fireplace landed in and ignited wood stored in a box. Fire then spread to the carpet and furniture. There were no smoke alarms and four of the five victims were asleep at the time. One victim, who was awake, found the exit blocked by flames. Three of the victims were under the age of six. The second fire was an exposure fire that was deliberately set in a vacant building and spread to the building where the victims lived. The third fire occurred in a 13-unit rooming house used for off-campus student housing. An incendiary fire originated in a couch on the front porch. The fire extended into the dwelling through a first-story window. Smoke alarms alerted the occupants, who attempted to extinguish the fire using extinguishers. The fourth fire occurred in a single-family dwelling when a youngster playing with a lighter ignited curtains. Fire spread to the hallway and the living area. There were no smoke alarms in the home. Three children under the age of six died. The fifth fire was set on the front porch of a two-story single-family home. It then extended up to the porch roof and into the dwelling through a first-story window. There were two smoke alarms – but one had no battery and the other had a dead battery. The cause of the three five-fatality fires was undetermined or not reported.

#### **Catastrophic Nonresidential Fires**

Ten catastrophic nonresidential structure fires killed 163 people in 2003. In comparison, five catastrophic nonresidential structure fires killed 22 people in 2002. Two each of these fires occurred in nursing homes, manufacturing properties, and storage properties. One each occurred in a nightclub, an office building, a mine, and a board and care facility. Table 2 shows the details for these fires.

The Station nightclub fire in West Warwick, Rhode Island, was the deadliest nonresidential structure fire of 2003. The smoke and fire killed 100 people in the one-story nightclub of wood-frame construction. This fire accounted for 33 percent of the year's total catastrophic fire deaths. At about 11 p.m., pyrotechnics used by a rock band ignited foam used on the wall for soundproofing. The fire rapidly engulfed the structure. There was no automatic suppression equipment present. Due to litigation, an official report hasn't been released.

The next two deadliest fires occurred in nursing homes. The first accounted for 16 deaths. The nursing home was one story in height and was of protected non-combustible construction. A patient using a lighter ignited bedding materials, and then watched the fire before going to the nurses' station for help. Nursing staff attempted to extinguish the fire as the smoke detection equipment in the corridor activated and alerted the occupants and the fire department. There was no automatic suppression equipment present. A second nursing home fire killed 14 people. This fire, whose cause is undetermined, broke out in a second-story patient room. The four-story nursing home was protected non-combustible construction. Products of combustion built up above a 38-inch dropped ceiling. The room then flashed over and the smoke activated corridor smoke alarms, alerting the occupants and central station, and activating the fire doors.

Seven people died in an automobile insulation plant explosion and fire. Fiberglass insulation panels were sent through a gas-fired oven for curing. The door to the curing oven was left open and the fire ignited airborne fiberglass particles, causing an explosion. The plant had a complete wet-pipe sprinkler system that operated and helped keep the fire from spreading throughout the rest of the factory. The seven victims were caught in the explosion and flames at or near their workstations.

Two fires killed six people each. The first was an explosion followed by a fire in a pharmaceutical plant. The explosion occurred when an unknown source ignited polyethylene dust particles released during the manufacture of rubber products. Details on the remaining fires can be found in Table 2.

#### **Catastrophic Nonstructure Fires**

There were nine catastrophic fires outside of structures five vehicle fires, three wildland-related incidents, and one involving agricultural land. These nine fires killed 53 people, up from 2002 when eight such fires killed 43 people.

The deadliest nonstructure fire of 2003 killed 14 people, including one firefighter. This was a wildland/urban interface fire that burned for several days on 208,000 acres (84,175 hectares), destroying 2,599 structures and 3,356 vehicles. A second wildland fire killed six people. This fire burned 91,000 acres (36,826 hectares), destroyed 1,003 structures, and damaged 35 others. The victims in both fires either were trying to protect property or trapped by the fire while trying to evacuate.

The third fire also involved a wildland fire. Eight firefighters returning to their home state after two weeks on a firefighting crew were killed when their van struck a tractor-trailer truck head-on. Six firefighters died of traumatic injuries and two from smoke inhalation. (These deaths are included in this study because the firefighter-victims were returning from a wildland fire.)

Six people were killed while they slept or hid when a 40-acre (16-hectare) sugar cane field was ignited during harvest. The fire was a legal burn and proper signals and warnings, in both English and Spanish, had been given. The victims, who weren't agricultural workers, didn't evacuate the area in time. Five workers were killed when fireworks exploded while they were transferring them from one truck to another. The cause of the explosion is under investigation. Four people died when their motor home caught fire while they were traveling on an interstate. Leaking gasoline ignited in the engine compartment and fire extended into the passenger compartment.

In another incident, a despondent driver stopped in traffic, set his car on fire that involved the vehicle interior and the passengers, then crashed into a house. One victim was a child under age six. One post-crash fire involved multiple vehicles on a highway. A car in the breakdown lane was struck from behind, causing the gasoline tank to rupture, and the leaking fuel ignited. The occupants of the car were trapped in the wreckage and died because of the fire.

A fire in a camper located on a construction site killed four people, including one child under the age of six. The cause of the fire wasn't reported. Table 3 shows the details on these and the other nonstructure fires.

### **Role of Smoke Alarms and Sprinklers**

Six of the 16 residential structures had smoke alarms. In four of the fires, there was no automatic detection system present. The presence of a system for the other six fires was undetermined or not reported. In only two of the fires with smoke alarms were they known to be operational.

Three homes had alarms with dead or missing batteries. The operation of the smoke alarm in the sixth fire couldn't be determined, but the building occupants were trapped behind barred windows. One incident in which detectors operated occurred in a manufactured home occupied by a family of 12. The only adult in the home was awakened by the smoke alarms, but heat prevented her from rescuing all the children. Ceiling panels collapsed, trapping some occupants. Six occupants behind a closed door in a back bedroom survived. In the other fire in which smoke alarms operated, the six victims were reportedly asleep after a party.

Smoke alarms have been proven effective in reducing the risk of death in home fires. The most effective and reliable home system is hard-wired interconnected smoke alarms, with battery backup, on each level, and in each bedroom. Homeowners should routinely test smoke alarms according to manufacturers' recommendations. Batteries should be replaced yearly and NFPA recommends testing residential smoke alarms monthly.

Smoke alarms are only effective if occupants exit the building when they sound. Children should be familiar with the sound of a properly operating smoke alarm. They should follow a practiced escape plan that emphasizes two exits with a designated meeting place.

Exit drills in the home are part of many school curricula. Practicing the plan helps families determine if children and others readily waken to the sound of a smoke alarm, and that, along with assistance for family members who require it, can be factored into the plan. Practicing fire prevention principles could have prevented many of the fires.

## Acknowledgments

NFPA wishes to thank the U.S. fire service for their contributions of data, without which this report would not be possible. The author would like to give a special thanks to his co-workers for their guidance in the completion of this report.

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Table 1. Catastrophic Residential Fires in the United States in 2003

| Location, Date,<br>Time of Alarm,<br>Number of Deaths.      | Occupancy Type,<br>Construction Type,<br>Number of Stories                          | Smoke Detectors<br>and other Fire<br>Protection Devices  | Fire Origin and Path  | Contributing Factors and Victim<br>Locations  |
|---|---|--|---|---|
| Pennsylvania<br>October, 6:00 p.m.<br>7 (two under age six) | One-story single-family dwelling of unprotected wood-frame construction.            | Not reported.  | Not reported.   | Not reported.   |
| Michigan December 11:21 p.m. 7 (two under age six)          | One-and-a-half-story single-family dwelling of unprotected wood-frame construction. | One smoke alarm had<br>no battery and part of<br>another was found, but<br>it couldn't be<br>determined if it had<br>operated. | An unattended child playing with matches or the stove ignited combustibles.   | Not reported.   |
| Ohio December 4:06 a.m. 7 (two under age six)               | Two-and-a-half story single-family house of unprotected wood-frame construction.    | The occupants had taken the alarms down.   | The fire began in the living room when a Christmas tree either fell over or was unintentionally knocked over onto a lit candle. | There was a delay in notifying the fire department while the family members arriving home attempted to extinguish the fire. Due to heavy fire and high heat conditions, firefighters were driven back in their rescue attempts. |

Table 1. Catastrophic Residential Fires in the United States in 2003 (Continued)

| Location, Date,<br>Time of Alarm,<br>Number of Deaths. | Occupancy Type,<br>Construction Type,<br>Number of Stories                          | Smoke Detectors<br>and other Fire<br>Protection Devices                                 | Fire Origin and Path   | Contributing Factors and Victim<br>Locations  |
|--|---|---|--|---|
| Michigan January 4:40 a.m. 6 (two under age six)       | One-story single-family dwelling of unprotected wood-frame construction.            | Not reported.   | Not reported.  | Not reported.   |
| Kentucky February 12:54 a.m. 6 (one under age six)     | One-story single-family dwelling of unprotected wood-frame construction.            | Partial coverage smoke alarms were present, but the batteries were disconnected.        | The fire originated at an electrical receptacle in the floor of the living room.  The problem with the receptacle wasn't reported.  The fire spread up the paneling, into the kitchen, and throughout the rest of the house. | The victims were in various bedrooms.   |
| California<br>July<br>3:20 a.m.                        | One-story single-<br>family dwelling of<br>unprotected wood-<br>frame construction. | Smoke alarms were present. The extent of coverage and if they operated wasn't reported. | Smoking materials ignited bedding.   | Security-barred windows with no quick-release mechanism prevented their escape and hindered rescuers. |

Table 1. Catastrophic Residential Fires in the United States in 2003 (Continued)

| Location, Date,<br>Time of Alarm,<br>Number of Deaths. | Occupancy Type,<br>Construction Type,<br>Number of Stories  | Smoke Detectors<br>and other Fire<br>Protection Devices           | Fire Origin and Path  | Contributing Factors and Victim<br>Locations   |
|--|---|---|---|--|
| Michigan July 10:00 p.m. 6 (four under age six)        | Two-story single-family dwelling of unprotected ordinary construction.                                      | None.   | A power strip for a window air-conditioning unit was pinned between a wall and a couch. It overheated and ignited the couch, window treatments, and penetrated the joist space. | The victims were in bed in second-story bedrooms and had no warning of the fire.   |
| North Carolina July 1:14 a.m. 6 (two under age six)    | One-story single-<br>family single-wide<br>manufactured home of<br>unprotected wood-<br>frame construction. | Partial coverage smoke alarms operated and alerted the occupants. | An unattended lit candle ignited combustibles.  | Two victims were trapped under a partially collapsed ceiling. The other four were attempting to escape. Six people survived this fire in a bedroom with a closed door. |
| Tennessee January 6:55 a.m. 5 (three under age six)    | One-story single-family dwelling of unprotected wood-frame construction.                                    | None.   | An ember from a living-room fireplace fell into a wood box and ignited stored wood. The fire spread to the carpet and furniture.  | Four of the five family members were asleep at the time of the fire. The other victim was awake but flames blocked the exit.   |

Table 1. Catastrophic Residential Fires in the United States in 2003 (Continued)

| Location, Date,<br>Time of Alarm,<br>Number of Deaths. | Occupancy Type,<br>Construction Type,<br>Number of Stories  | Smoke Detectors<br>and other Fire<br>Protection Devices                       | Fire Origin and Path   | Contributing Factors and Victim Locations  |
|--|---|---|--|--|
| New York<br>March<br>1:40 a.m.<br>5                    | Low-rise apartment building of unprotected wood-frame construction. One of several buildings ignited in a neighborhood conflagration. | Not reported.   | A fire set in the building next door spread into this building and several others in the neighborhood.   | Not reported.  |
| New York<br>March<br>4:46 a.m.                         | Two-story single-family dwelling of unprotected ordinary construction.  | Not reported.   | Not reported.  | Not reported.  |
| Ohio<br>April<br>4:05 a.m.<br>5                        | Three-story, 13-unit rooming house of unprotected woodframe construction.   | Complete coverage smoke detection system activated and alerted the occupants. | A fire set in a couch on the first-level porch extended into the structure through a first-story window. | Occupants were asleep after a party when the fire broke out. Victims were in various rooms through out the building. An occupant attempted to extinguish the fire with a hand-held extinguisher. |

Table 1. Catastrophic Residential Fires in the United States in 2003 (Continued)

| Location, Date,<br>Time of Alarm,<br>Number of Deaths.          | Occupancy Type,<br>Construction Type,<br>Number of Stories                          | Smoke Detectors<br>and other Fire<br>Protection Devices                              | Fire Origin and Path   | Contributing Factors and Victim<br>Locations                    |
|---|---|--|--|---|
| Illinois<br>May<br>2:50 a.m.<br>5 (two under age six)           | One-story single-family manufactured home.  | Not reported.  | Not reported.  | Not reported.   |
| Mississippi<br>October<br>12:36 a.m.<br>5 (three under age six) | One-story single-<br>family dwelling of<br>unprotected wood-<br>frame construction. | None.  | A youngster playing with a lighter in a bedroom ignited the curtains. The fire spread into the hallway and into the living area.   | Four children were in one bedroom and one child was in another. |
| Pennsylvania<br>November<br>3:42 a.m.<br>5 (one under age six)  | Two-story single-family dwelling of unprotected ordinary construction.              | There were two smoke alarms but one had a dead battery and the other had no battery. | This fire was set on a porch at the front door and extended to the porch roof and into the house via a front window where it ignited a foam-padded sofa. Smoke and flames extended via the stairway to the second story. | Four victims were found on the second story.                    |

Table 1. Catastrophic Residential Fires in the United States in 2003 (Continued)

| Location, Date,<br>Time of Alarm,<br>Number of Deaths. | Occupancy Type,<br>Construction Type,<br>Number of Stories                   | Smoke Detectors<br>and other Fire<br>Protection Devices | Fire Origin and Path | Contributing Factors and Victim Locations  |
|--|--|---|----------------------|--|
| Texas December 11:45 a.m. 5 (all under age six)        | Two-story, 16-unit apartment building of unprotected woodframe construction. | Not reported.   | Under investigation. | A door left open by a bystander in rescue attempt increased the intensity and fire spread. |

 Table 2. Catastrophic Nonresidential Fires in the United States in 2003

| Location, Date, Time of Alarm, Number of Deaths | Occupancy Type & Use,<br>Number of Stories,<br>Construction Type,<br>Operating Status | Detection<br>Systems   | Suppression<br>Systems   | Fire Origin & Path   | Contributing Factors  |
|---|---|--|--|--|---|
| Rhode Island<br>February<br>11:00 p.m.<br>100   | One-story nightclub of unprotected wood-frame construction. Operating.                | There was automatic detection equipment, but the type wasn't reported.   | None present.  | A rock band's pyrotechnics display ignited foam material used on the wall of the stage for soundproofing. The fire spread throughout the structure in a matter of minutes. | Flammable soundproofing materials.  |
| Connecticut<br>February<br>2:40 a.m.<br>16      | One-story nursing home of protected non-combustible construction. Operating.          | There were smoke alarms in the corridors. One of them activated, alerting the occupants and the fire department. | None present. There was a firewall and fire doors that closed when the alarm activated, which kept the fire from spreading to the adjacent wing. | A patient using a lighter and bedding materials set a fire.  | Elderly and disabled patients had to be assisted from the structure. The lack of a sprinkler system allowed the fire to spread. |

Table 2. Catastrophic Nonresidential Fires in the United States in 2003 (Continued)

| Location, Date, Time of Alarm, Number of Deaths | Occupancy Type & Use,<br>Number of Stories,<br>Construction Type,<br>Operating Status                           | Detection<br>Systems  | Suppression<br>Systems   | Fire Origin & Path   | <b>Contributing Factors</b>  |
|---|---|---|--|--|--|
| Tennessee<br>September<br>10:18 p.m.<br>14      | Four-story nursing home of protected noncombustible construction. Full operation.                               | There were smoke alarms in the corridor and one sounded the alarm in a central station and closed the fire doors. | None.  | Fire broke out in a second-story patient room and spread upwards from a bed. Gases built up above a dropped ceiling and the room flashed over. The cause is under investigation. Employees with hand-held extinguishers couldn't put out the large fire. | A dropped ceiling allowed smoke to build and delayed the activation of the hallway smoke alarms. |
| Kentucky<br>February<br>7:31 a.m.               | Two-story automobile insulation manufacturing plant of unprotected noncombustible construction. Full operation. | Complete coverage automatic detection system operated and notified the building occupants.                        | A complete coverage wetpipe sprinkler system operated and prevented the fire from spreading. | A fire involving residual products occurred inside an oven used to cure fiberglass insulation panels. An open oven door, allowed the fire to ignite airborne fiberglass dust. Fiberglass particles creating an explosion.                                | Explosion and flame caught the victims at or near their workstations.                            |

Table 2. Catastrophic Nonresidential Fires in the United States in 2003 (Continued)

| Location, Date, Time of Alarm, Number of Deaths | Occupancy Type & Use,<br>Number of Stories,<br>Construction Type,<br>Operating Status                                       | Detection<br>Systems | Suppression<br>Systems                          | Fire Origin & Path  | <b>Contributing Factors</b> |
|---|---|----------------------|---|---|-----------------------------|
| North<br>Carolina<br>January<br>1:27 p.m.       | Pharmaceutical plant. Operating.  | Not reported.        | Not reported.                                   | An unknown source ignited polyethylene dust particles released during the manufacture of rubber products. The dust built up above tiles of a dropped ceiling. This ignition caused a dust explosion.  | Not reported.               |
| Illinois<br>October<br>5:03 p.m.                | A 27-story office<br>building of protected<br>noncombustible<br>construction was<br>closing for the night,<br>but occupied. | Not reported.        | Sprinklers were<br>on the ground<br>floor only. | The fire started in a supply room on the 12th floor and extended into an adjacent office area. Fire department and county investigations have reported different ignition sources, but the fire involved boxes and paper products stored in the room. | Not reported.               |

Table 2. Catastrophic Nonresidential Fires in the United States in 2003 (Continued)

| Location, Date, Time of Alarm, Number of Deaths | Occupancy Type & Use,<br>Number of Stories,<br>Construction Type,<br>Operating Status   | Detection<br>Systems   | Suppression<br>Systems | Fire Origin & Path   | <b>Contributing Factors</b>                               |
|---|---|--|------------------------|--|---|
| Texas<br>April<br>10:13 p.m.<br>4               | A 300-barrel fuel oil storage tank measuring 15 feet (4.5 meters) tall and 12 feet (3.6 meters) wide. This was one of two tanks in an unfenced field. | None.  | None.                  | Several youths had gathered on top of a tank and one used a cigarette lighter at a hatch door to see what was inside. An explosion resulted, blowing the top off the tank and propelling the youths several feet away from the tank. | Not reported.   |
| California<br>October<br>2:30 a.m.<br>4         | One-story board-and-<br>care facility of<br>unprotected wood-<br>frame construction.<br>Full operation.   | Partial coverage smoke detection, but multiple detectors were missing. | None.                  | A fire of undetermined origin started in a first-story bedroom.  | Quadriplegic residents and security bars hindered egress. |

Table 2. Catastrophic Nonresidential Fires in the United States in 2003 (Continued)

| Location, Date, Time of Alarm, Number of Deaths | Occupancy Type & Use,<br>Number of Stories,<br>Construction Type,<br>Operating Status | Detection<br>Systems | Suppression<br>Systems | Fire Origin & Path  | <b>Contributing Factors</b>  |
|---|---|----------------------|------------------------|---|--|
| West Virginia<br>January<br>1:00 a.m.<br>3      | A mineshaft, at approximately 950 feet (289 meters).                                  | Not reported.        | Not reported.          | Six workers were attempting to remove a galvanized steel sheet blocking access to an unvented water ring (a ring in the shaft for water drainage). They cut a hole and placed a hand-held meter into the opening to obtain a methane reading. The reading was fine and a mechanic started cutting with a torch. An explosion occurred. Investigators believe that sparks or embers fell into an explosive level of methane-air mixture that was below the reach of the meter. | An inadequately conducted examination for methane before cutting operations. No ventilation of water ring was performed before cutting operations. |

Table 2. Catastrophic Nonresidential Fires in the United States in 2003 (Continued)

| Location, Date, Time of Alarm, Number of Deaths | Occupancy Type & Use,<br>Number of Stories,<br>Construction Type,<br>Operating Status     | Detection<br>Systems | Suppression<br>Systems   | Fire Origin & Path   | <b>Contributing Factors</b>   |
|---|---|----------------------|--|--|---|
| Texas<br>July<br>5:00 p.m.                      | One-story fireworks warehouse of unprotected-noncombustible construction. Full operation. | None.                | There was a complete coverage wetpipe sprinkler system present, but it was destroyed in the explosion. | Office personnel heard a sound as a charge went off in a room used to prepare fireworks for a display. | Fire department investigators estimate that the workers had only five seconds to evacuate before the explosion. |

Table 3. Catastrophic Non-Structural Fires in the United States in 2003

| Location, Date,<br>Time of Alarm,<br>Number of<br>Deaths        | Setting  | <b>Climate Condition</b> | Fire Origin & Path  | Factors Hindering Occupant Escape                                     |
|---|--|--------------------------|---|---|
| California October 5:37 p.m. 14 (one firefighter, 13 civilians) | Wildland-urban interface.  | Hot and dry.             | Wildland fire spread through 208,000 acres (84,175 hectares), destroying 2,599 structures and 3,356 vehicles. The fire's cause is under investigation.  | The victims died while attempting to evacuate or protecting property. |
| Oregon<br>August<br>10:00 a.m.<br>8                             | Firefighters were returning to Oregon from fighting an Idaho wildland fire when their vehicle was involved in a highway crash. | Sunny.                   | Their van crossed a divided highway, crashed head on with a tractor-trailer truck, and exploded in flames. Two firefighters died of smoke inhalation and six died of traumatic injuries.        | Head-on collision and ensuing fire.                                   |
| Texas<br>March<br>10:30 a.m.                                    | A 40-acre (16 hectare) sugar cane field.   | Not reported.            | A legal fire was set to harvest a sugar cane field. Warnings were given, but the six victims were either sleeping or hiding. Three people died at the scene, and three died later at hospitals. | Not reported.   |

Table 3. Catastrophic Non-Structural Fires in the United States in 2003 (Continued)

| Location, Date,<br>Time of Alarm,<br>Number of<br>Deaths | Setting  | Climate Condition | Fire Origin & Path  | Factors Hindering Occupant Escape  |
|--|--|-------------------|---|--|
| California<br>October<br>9:16 a.m.                       | Wildland-urban interface.  | Hot and dry.      | This wildland fire was deliberately set and spread through 91,000 acres (36,826 hectares), destroyed 1,003 structures and damaged 35 others.  | The victims died while attempting to evacuate or protecting property.  |
| Florida<br>July<br>2:10 p.m.<br>5                        | Truck loaded with fireworks. Workers were unloading fireworks from one truck to another. | Sunny and warm.   | An explosion occurred in the cargo area of the truck. The cause is under investigation.   | The explosion prevented their escape.  |
| Nebraska<br>May<br>4:10 p.m.<br>4                        | Motor home traveling on interstate.  | Not reported.     | A fire broke out in the engine compartment when gasoline from a rubber or plastic fuel line leak ignited. An electric fuel pump continued to operate, pumping fuel onto the fire. The vehicle was traveling at approximately 40 miles per hour (64 kilometers per hour), pushing the fire and smoke into the passenger compartment. | Eight people were in the vehicle at the time. The driver escaped by jumping out of the moving vehicle. Rescuers were hindered because the rear door was jammed due to damage when the vehicle left the road and traveled through a ditch and into a pasture. |

Table 3. Catastrophic Non-Structural Fires in the United States in 2003 (Continued)

| Location, Date,<br>Time of Alarm,<br>Number of<br>Deaths            | Setting                                    | Climate Condition | Fire Origin & Path   | Factors Hindering Occupant Escape                            |
|---|--|-------------------|--|--|
| North Carolina<br>October<br>12:15 a.m.<br>4 (one under age<br>six) | An aluminum camper at a construction site. | None reported.    | None reported.   | None reported.   |
| North Carolina<br>August<br>10:30 p.m.                              | Multi-vehicle crash and fire.              | Not reported.     | A vehicle in the breakdown lane was struck in the rear by another vehicle. The impact caused a leak in the fuel tank or fuel line, which ignited. The cause of the ignition is under investigation.                      | Occupants were trapped due to vehicle damage from the crash. |
| Florida December 2:00 p.m. 3 (one under age six)                    | A passenger vehicle.                       | Not reported.     | A despondent driver set his car on fire, which involved the vehicle interior, two children, and himself. The car then crashed into an occupied house. The fire was confined to the vehicle and didn't involve the house. | Not reported.  |

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